THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today was ***not*** written for publication and is ***not*** binding precedent of the Board.

Paper No. 19

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SATISH SUNDAR

Appeal No. 1999-1759
Application No. 08/749,614

ON BRIEF

Before CALVERT, COHEN, and FRANKFORT, Administrative Patent Judges.

CALVERT, Administrative Patent Judge.

ON REQUEST FOR REHEARING

This is in response to appellant's request for reconsideration (rehearing) of our decision mailed April 4, 2000, wherein we affirmed the examiner's rejection of claims 1 through 4, 6 through 14, 17 through 21, 23 through 31 and 34 through 46 under 35 U.S.C. § 103 as being unpatentable over Tada in view of Lucas and Lowrance.

We have carefully considered each of the points of argument raised by appellant in the request for rehearing, however, those arguments do not persuade us that our decision was in error in any respect.

While it is true that the individual references relied upon in the above-noted rejection do not expressly disclose that a time optimal path must necessarily include simultaneous wafer extension and rotation to achieve the high wafer throughput and other advantages sought by appellant (specification, page 8), we remain of the view expressed on pages 8 through 10 of our decision mailed April 4, 2000, that one of ordinary skill in this highly technical art would have found reasonable suggestion in the collective teachings of the applied references for combining them in the manner urged by the examiner so as to result in appellant's claimed apparatus and method wherein a time optimal path is implemented via program code in a controller and comprises one or more regions of simultaneous radial and rotational movement of the wafer blade.

To the extent that appellant is seeking an express indication in the applied references that a time optimal path will necessarily include one or more regions of simultaneous

radial and rotational movement of the wafer blade, we observe that it is not necessary that the cited references specifically suggest making the claimed combination, see In re Nilssen, 851 F.2d 1401, 1403, 7 USPQ2d 1500, 1502 (Fed. Cir. 1988), that a reference must be considered not only for what it expressly teaches, but also for what it fairly suggests (In re Burckel, 592 F.2d 1175, 1179, 201 USPQ 67, 70 (CCPA 1979); In re Lamberti, 454 F.2d 747, 780, 192 USPQ 278, 280 (CCPA 1976)), as well as the reasonable inferences which the artisan would logically draw from the reference (In re Shepard, 319 F.2d 194, 197, 138 USPQ 148, 150 (CCPA 1963)), and that, in an obviousness assessment, skill is presumed on the part of the artisan, rather than the lack thereof. See In re Sovish, 769 F.2d 738, 742, 226 USPQ 771, 772 (Fed. Cir. 1985).

Appellant's argument that the Board's position that the motivation to combine the applied references to increase wafer throughput is "so exceedingly broad as to invite any

combination of references in hindsight" (request, page 2), is belied by the disclosure in the applied references and appellant's own specification. As an example, both the Lucas patent (col. 3, lines 48-59) and appellant's specification (e.g., page 4) emphasize increased throughput as an advantage or objective of their respective systems, with Lucas specifically seeking to increase throughput by shortening the transfer time of the robot and, more specifically, by producing a time optimal robot arm trajectory for increasing substrate handling tool throughput. Thus, in our view, increased throughput would be recognized by one of ordinary skill in the art as a desirable objective and would clearly provide an adequate motivation for combining references, like those selected and applied by the examiner, in this art.

As for appellant's assertion (request, page 2) that the references "do not even suggest a wafer blade path that includes simultaneous rotation and extension," we find such position to be contrary to the clear teaching and suggestion in Lowrance at column 7, lines 6-9, wherein that patentee suggests that combinations of motor rotations therein "can be

used to extend or retract the wafer blade as the robot is being rotated about motors 51 and 52," and thus is clearly suggestive of a wafer blade path that includes simultaneous rotation and extension of the robot mechanism. Moreover, we note the IEEE papers incorporated by reference into the disclosure of the applied Lucas patent (col. 2, lines 18-37),[1] wherein there is a clear

[1] For appellant's convenience, copies of these IEEE papers are attached to this decision.

showing that those skilled in this art would have recognized that a time optimal path would include one or more regions of simultaneous radial and rotational movement of the robot arms. See particularly Paper No. 4) Shiller et al., page 148, Figures 8 and 9. See also Tada, column 6, lines 22-25, where it is indicated that the semiconductor wafer (14) "can efficiently be transferred between the processing chambers by the combination of the stretching and contracting motion and the turning motion of the frog leg linkage."

Thus, when the collective teachings of the references applied by the examiner are considered from the perspective of one having ordinary skill in the art, we remain of the opinion that the subject matter of representative independent claim 1 on appeal would have been obvious to a person of ordinary skill in the art at the time of appellant's invention. In accordance with appellant's indication in the brief (page 3), we again note that claims 2 through 4, 6 through 14, 17 through 21, 23 through 31 and 34 through 46 on appeal are considered to fall with claim 1.

In light of the foregoing, appellant's request is granted to the extent of reconsidering our decision, but is denied with respect to making any changes therein.

No period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

DENIED

IAN A. CALVERT Administrative Patent Judge	)
IRWIN CHARLES COHEN Administrative Patent Judge	) BOARD OF PATENT) APPEALS) AND) INTERFERENCES
CHARLES E. FRANKFORT Administrative Patent Judge	)

CEF/sld

PATENT COUNSEL
APPLIED MATERIALS INC
P.O. BOX 450A
SANTA CLARA, CA 95052

Shereece

Appeal No. 1999-1759
Application No. 08/749,614

APJ CALVERT

APJ

APJ